

Mental Ability — 1924.

## LETTERS TO THE EDITOR.

### INTELLIGENCE TESTS.

[To the Editor of the SPECTATOR.]

interpretation. The questions were given in three instalments with a time limit of fifty minutes. One hundred and seven Harvard students averaged 50.5 per cent, and thirty-seven Radcliffe girls averaged 55 per cent. A Harvard and a Radcliffe student tied for first place at 86 per cent, and a Harvard boy held the cellar record at 9 per cent. Dr. Roback, who devised the comparison test, was not surprised at the distaff victory, for the reason that college women are far more closely selected than college men. Few women attempt a higher education unless they possess special aptitude and have a special purpose, whereas many young men attend college merely because it is the thing to do in their set.

The speaker at Madison was Professor W. V. Bingham of the Carnegie Institute of Technology, who, reporting from examination of a hundred cases, said that superiority in intelligence as measured by army tests, while commonly necessary, contributes less to business than does superiority in certain non-intellectual traits of personality. Althoughsor draws the conclusion that a eighty-three leaders in industry, more careful selection of men also out of the hundred studied, made should be made by means of more relatively high scores, two of the strict entrance examinations. lowest scores were made by pres- In conclusion it might also be

idents of large and prosperous recalled that recent studies of the businesses.

after lives of Rhodes scholars Another scientist who finds the fails to show that pupils, chosen so-called intelligence tests not to for those scholarships by high be all conclusive is Dr. J. McKeen Cattell, president of the Association for the Advancement of Science, who delivered an address be-sought. Perhaps that first strike the psychologists at the an-ing success sates their appetite nual convention of the associa-for progress?

tion at New York. He said among "Intelligence tests" show intel- other things: "To be a Phi Beta ligence, but intelligence must be Kappa man or an Alpha Plus man coupled with industry, thrift or is an introduction to 'Who's Who' daring, energy and initiative, or and a salary of \$5000, but the men that indescribable quality which is who build cities, railways and in-the persuasive or compelling will dustry are not selected merely to lead. by intelligence tests." There are traits of character and tempera- ment as vital to success as mere smooth-running mentality.

At Boston the question was a bit different since, there, it was in the form of an intelligence comparison between students of Radcliffe and Harvard, in which the girls emerged victors by a margin of 4½ per cent. The tests, in this case, were based on relative speed in observation, deduction, mental application and in-

SIR.—The article on mental tests in your issue of May 24th was doubtless interesting, and perhaps profitable, to readers unacquainted with the subject, but it contained a few extravagant statements that seem likely to mislead the layman. The writer of the article quotes Professor Spearman:

"Intelligence is inborn. It cannot be increased by cultivation nor decreased by neglect." This statement contains sufficient truth to be worthy of further inquiry and sufficient falsehood to be dangerous. If it were true, as, to a hitherto unknown extent, it is, that intelligence could not be trained, it would still be true that a child could have intelligence and not use it; from the educator's point of view there is little difference between training a child's intelligence and training the child to use his intelligence. The danger of the "determinist" view, that intelligence is "untrainable," is that it leads easily to educational pessimism and underestimates the enormous control (for good or bad) that a teacher can exert upon a child's mind. This problem recently was the subject of a hard fight between Terman and other professors in America, in which the determinist Terman was—I suggest—defeated by Bagley and other antagonists. I cannot resist retorting to your contributor's quotation from Spearman with another statement by the same psychologist in his book on *The Nature of Intelligence*: "The reason is now evident why all search for the meaning of 'intelligence' has . . . always ended in failure. It is simply that . . . this word in its ordinary present-day usage does not possess any definite meaning."

Your contributor appears to share, with many who write about intelligence, an erroneous idea that we can with present day intelligence tests measure something which is inborn and more or less independent of the child's environment and upbringing. He compares intelligence with the soil which the farmer should analyse before sowing the seed. Whatever the mental soil is like at birth, "sowing" begins when the child draws its first breath. The results of application of an intelligence test always depend to a large extent upon the child's past life, as shown by Mr. Hugh Gordon's recent work with gipsy and canal-boat children and other inquiries. They depend also—in spite of Terman's assertions to the contrary—upon social status, home-life (to which Mr. Clarke refers), physique, and the type of intelligence (linguistic, mechanical, &c.) which the child happens to possess. At present it is more important, in articles for popular reading, to emphasize the dependence of intelligence upon these post-natal factors than its undoubted relation to certain qualities of the child that are truly "inborn." It may also be pointed out that most present-day tests give more credit to the linguistic and symbolic, than to mechanical and other types of intelligence. We therefore expect (and find) a close relationship between success in such tests and success in school, for the child whose intelligence is of the practical kind has often little scope in a modern school. Your contributor writes more enthusiastically than wisely when he claims that by means of intelligence tests "the work of instructing the young will be changed from heart-breaking drudgery to a delightful occupation." A frequent cause of the drudgery of teaching is the unintelligence, not of the pupils, but of the teacher.

In the past "seven years of mental tests" psychologists

have sought to refine our ideas of mental constitution and to provide more and more dependable tests of mental capacities. It would be a pity if tests so carefully evolved were carelessly used—another case of Dante and the blacksmith. Rough and ready estimate of intelligence by the teacher is valuable, and not new, but the teacher who uses standard tests for that purpose is as reprehensible as one who plays football on a bowling green.—I am, Sir, &c.,

E. R. HAMILTON.

University College, North Wales.

### NOT SO FAR APART.

Theories of racial superiority as among the white peoples were lightly brushed aside by the anthropologists who threshed out the subject at one of the sessions of the American Philosophical Society in Philadelphia last week. On the question of the innate superiority of the white races over the black races, there was a much sharper division of opinion.

The case against the colored races was most forcibly presented by H. U. HALL, curator of ethnology in the museum of the University of Pennsylvania. He stressed the point that the negro tribes of Africa are constitutionally defective in will-power and in the sense of individual responsibility. This is shown by their universal submission to the autocratic rule of tribal chieftains and medicine men. Part of Mr. HALL's argument deserves to be quoted verbatim:

April 28, 1924  
In the region of the Upper Nile, among such tribes as the Bari, the Lakuta and others, the magicians, whose principal function is that of rain-making, are the chiefs. Rain is the one thing which matters to the people in those districts; for if it does not come down at the right time, this means that their animals and their crops, their only resources, are destroyed. These chiefs, the rain-makers, have various ways of producing rain. One may have a collection of rain-stones such as rock crystals and amethysts. These he plunges into water and, taking a cane, beckons with it to the clouds, accompanying his gesture with an incantation.

This evidence would seem to be convincing. But in all fairness it should be compared with the discoveries made by a recent scientific expedition of Bari and Lakuta natives in another continent. The report of this expedition reads in part:

In the region of the Upper Mississippi and its major tributaries, among such tribes as the Wisconsians, the Illinoisans, the Indianans and the Non-Partisan tribes of Minnesota and the Dakotas, the custom is to select every four years a chieftain, resident at the national kraal called Washington, whose chief function is to make

rain, develop a high production of sun-light, ward off cyclones, and in every other way promote the growth of the crops and the hogs upon which these tribes depend for their subsistence. If climatic conditions have been unfavorable under a chieftain of one great clan, known as the Republicans, the tribesmen replace him with a chieftain from another clan, known as the Democrats, and vice versa. The Republicans have amassed a large collection of magic rain-stones, such as Home Markets, American Standards of Liv-

*Another vexation for  
The Psychologists*

~~I~~ would not be surprised if the learned intelligence probers

soon discovered different races within the Negro race, to account for the amazing discrepancies between present theories and fact. In comparative measurements of white and Negro children, the Negroes always trail behind in varying degrees of deficiency. But the Negro children of California, for example, are compared with the white children of North Carolina, by the same standard tests, this relation threatens to be sharply reversed. While a perfectly obvious test of the test, not one of the proponents of innate difference has dared try it.

The nearest approach to such a comparison is a study of the educational status of Los Angeles Negro children by Willis W. Clark, Assistant Superintendent of Schools of that city published by the Department of Psychology and Educational Research of Los Angeles City Schools. He sought the intelligence levels of Negro children as compared with the total population of fifteen elementary schools, basing this on the National intelligence tests. The median I. Q. for the Negroes was 104.7 and for the whites 106.0, a difference regarded as of no significance. But when the schools were divided it was found that seven of them ranked lower than the Negroes, in one case nine points lower.

This is a difference, it can be easily calculated, about four and one-half times greater than the difference registered between the whites and the Negroes. The question is, naturally, are the Negroes superior to the white children of these seven schools below them as certainly as the whites are superior to the Negroes in the eight schools above them?

More striking still, the Negro children measured an intelligence quotient 0.346 of a year above average chronological age or a median I. Q. of 104.7 as compared with but 0.18 or a median I. Q. of 101.8 for unselected white children in forty schools. Moreover, in the educational accomplishment tests these Negro children made their highest scores in arithmetic, an abstract subject which they are not expected to comprehend.

What these results indicate, if anything at all, is that such differences as can be honestly found when the environment is about the same are even less important than can be found among the children of any ordinary family. We prophesy for this study, despite its scrupulous honesty, a speedy submergence.

Race Test Theory Bunk

# The Mind of Primitive Man in West Africa

By E. P. COTTON

Former Commissioner of Lands and Director of Surveys, Nigeria,  
British Colonial Government, Africa

New York City, Aug. 21.—Electric theories of the late Dr. Abrams out of which he made millions by claiming to be able to distinguish the blood of the races, etc., were termed the greatest bunk in history by the Scientific Committee this week.

The committee worked on Dr. Abrams' theory a year before making a report. Abrams and those allied with him claim that from a single drop of blood a man's race, religion, age and how long he would live could be determined. The theory fell down one day when the blood of a chicken was submitted and the scientists declared it was human.

*8-22-24*  
LET us consider the higher branches of the Yoruba race. I am of the opinion that their brains are equal to ours, or, at any rate, equal to mine. Let me mention one in particular—Henry Carr, M.A., B.C.LL., etc. If you turn to the key to Locke's trigonometry, you will find that it was written by Henry Carr, of Lagos. If he did not write it before he was twenty, he must have done so very shortly after. I know him very well indeed; it was a pleasure to hear him discuss the intricacies of calculus. I had in my department a dozen or so of young Yorubas, nearly all of whom were educated in Lagos, by native teachers. I established a sort of survey school and taught them the elements of plane and spherical trigonometry, also practical astronomy, including the determination of latitude, azimuth, and time. The majority of them soon became remarkably proficient in these subjects and in a year, I should say, were able to make

the necessary observations. When making observations for azimuth, it is desirable to observe the star when the three functions—co-altitude, co-latitude, and co-declination—form a spherical triangle that is fairly symmetrical. Considerable preliminary calculation is obviated if one can visualize in the heavens those stars that will form such a triangle at a suitable time. A few of the young Yoruba surveyors became exceptionally smart in selecting suitable stars and were of great assistance in this class of work; also in working the astronomical calculations they were equally proficient. Their memory is so excellent that after having "called out" a seven figure logarithm, which was common to a series of calculations, they seemed to have no difficulty in remembering it, at any rate, for several hours—indeed, I believe for a much longer period. At first, I doubted their memory and made them look up the logarithms; but I soon found that such precaution was unnecessary.

Their ear is of a refinement that is quite beyond my conception. When naming rivers, etc., I used to get a reliable local native to pronounce the name. Three native clerks wrote it down. I think I am correct in stating that fully ninety per cent of these words agreed exactly in the spelling by the three native clerks.

On the other hand, let me illustrate by a single case the persistence of folk beliefs. A friend of mine while out shooting, surprised a native solicitor in the act of sacrificing a bull.

This man was, I believe, a graduate of one of the English universities. He had to appear before the local court to show cause why he should not be struck off the roll. He informed my friend that although he was a Christian, he felt compelled when in great trouble to return to the religion of his fathers. This cult, like so many others, is chiefly that of the appeasement of evil spirits, and this native still had it in the back of his head.

The sociologists affirm that education, culture, and studious habits are an evolution of centuries. In all probability many of the fathers of the educated natives whom I have encountered and mentioned above were uneducated; possibly some of their grandfathers were even cannibals.

In the great majority of cases their environment and home training could not have been much above that of an ordinary native village, and I am afraid that the European influence in many instances was not very elevating. What, then, was the urge that stimulated them to deviate so widely from the general attitude of their group? It is my opinion that these natives had an innate mental aptitude for assimilating knowledge and were fortunate in having men about them, young Europeans with ability and inclination to create an atmosphere of intellectual leadership, so that native intelligence could be directed into proper channels.

My observations and experiences do not permit me to accept the prevalent idea that human nature is constant, that it may take on a veneer, but never changes. No evolutionist could hold such a theory. I am of the opinion that human nature has changed, perhaps not permanently, but certainly measurably.

Apparently then, and this is the conclusion of my whole scattered discussion, native ability is pretty widely distributed and does not follow distinctly class or race lines.

—Extract from article appearing in *JOURNAL OF APPLIED SOCIOLOGY* for Sept.—Oct.—1924.